

**Amendments to the Claims:**

This listing of claims will replace all versions, and listings, of claims in the application:

1. (Currently amended) A method of navigating data stored on a data storage device connected to a computer, the method comprising:

registering first source data in an information catalog, wherein the catalog defines a plurality of functional objects for creating user-defined object types;

in response to receiving input from a user navigating a plurality of data objects stored in the information catalog, selecting a first target data object in the information catalog;

providing transformation lineage information about the first source data from which the first target data object was derived via a transformation performed on the first source data to derive the first target data object;

providing transformation model information of the transformation performed on the first source data to derive the first target data object, the transformation model information providing a user with transformation producing function information of the first target data object including a derivation of the first target data object from the first source data;

using a metadata synchronizer, detecting a change in the registered first source data as changed source data, and ~~updating~~selectively refreshing metadata in the information catalog to reflect the detected change;

registering the changed source data in the information catalog;

selecting a second target data object, the second target data object being related to the changed source data by the transformation performed on the changed source data to derive the second target data object; and,

providing updated transformation lineage information about the changed source data from which the second target data object was derived via the transformation performed on the changed source data to derive the second target data object.

2. (Previously Presented) The method of claim 1, further including representing the target data object as a node in a tree structure.

3. (Previously Presented) The method of claim 1, wherein the providing information further includes providing transformation information, said transformation information comprising information about a transformation performed on said source data to derive said target data object.

4. (Previously Presented) The method of claim 3, wherein the providing said transformation information further comprises identifying a transformation producing function used to transform said source data.

5. (Previously Presented) The method of claim 1, wherein the providing said information further comprises providing lineage information which identifies said source data.

6. (Previously Presented) The method of claim 5, further comprising the maintaining transformation models for use in providing the lineage information, said transformation models maintaining information about the source data of the target data object.

7. (Currently amended) An apparatus for navigating data, comprising:  
a computer having a memory and a data storage device coupled thereto that stores the data in an information catalog; and,  
one or more computer programs, performed by the computer, for:  
registering first source data in an information catalog, wherein the catalog defines a plurality of functional objects for creating user-defined object types;  
in response to receiving input from a user navigating the data stored in the information catalog, selecting a first target data object stored in the information catalog;  
providing transformation lineage information about the first source data from which the first target data object was derived via a transformation performed on the first source data;  
providing transformation model information of the transformation performed on the first source data to derive the first target data object, the transformation model information providing a user with transformation producing function information of the first target data object including a derivation of the first target data object from the first source data;

using a metadata synchronizer, detecting a change in the registered first source data as changed source data, and ~~updating~~selectively refreshing metadata in the information catalog to reflect the detected change;

registering the changed source data in the information catalog;

selecting a second target data object, the second target data object being related to the changed source data by the transformation performed on the changed source data to derive the second target data object; and,

providing updated transformation lineage information about the changed source data from which the second target data object was derived via the transformation performed on the changed source data to derive the second target data object.

8. (Previously Presented) The apparatus of claim 7, wherein the target data object is represented as a node in a tree structure.

9. (Previously Presented) The apparatus of claim 7, wherein said one or more computer programs comprise means for providing transformation information, said transformation information comprising information about a transformation performed on said source data to derive said target data object.

10. (Previously Presented) The apparatus of claim 9, wherein the transformation information identifies a transformation producing function used to transform said source.

11. (Previously Presented) The apparatus of claim 7, wherein said one or more computer programs comprise means for providing lineage information which identifies said source data.

12. (Previously Presented) The apparatus of claim 11, further comprising means for maintaining transformation models for use in providing the lineage information, said transformation models maintaining information about the source data of the target data object.

13. (Currently amended) An article of manufacture comprising a program storage medium readable by a computer and embodying one or more instructions executable by the computer to perform a method for navigating data stored in an information catalog on a data storage device, the method comprising:

registering first source data in an information catalog, wherein the catalog defines a plurality of functional objects for creating user-defined object types;

in response to receiving input from a user navigating a plurality of data objects stored in the information catalog, selecting a first target data object stored in the information catalog, the first target data object being derived by a transformation performed on first source data;

providing transformation lineage information about the first source data from which the first target data object was derived;

providing transformation model information of the transformation performed on the first source data to derive the first target data object, the transformation model information providing a user with transformation producing function information of the first target data object including a derivation of the first target data object from the first source data;

using a metadata synchronizer, detecting a change in the registered first source data as changed source data, and ~~updating~~selectively refreshing metadata in the information catalog to reflect the detected change;

registering the changed source data in the information catalog;

selecting a second target data object, the second target data object being related to the changed source data by the transformation performed on the changed source data to derive the second target data object; and,

providing updated transformation lineage information about the changed source data from which the second target data object was derived via the transformation performed on the changed source data to derive the second target data object.

14. (Previously Presented) The article of manufacture of claim 13, wherein the target data object is represented as a node in a tree structure.

15. (Previously Presented) The article of manufacture of claim 13, wherein the providing information further comprises providing transformation information, said

transformation information comprising information about a transformation performed on said source data to derive said target data object.

16. (Previously Presented) The article of manufacture of claim 15, wherein the providing transformation information further comprises identifying a transformation producing function used to transform said data source.

17. (Previously Presented) The article of manufacture of claim 13, wherein the providing said information further comprises providing lineage information which identifies said source data.

18. (Previously Presented) The article of manufacture of claim 17, wherein said method further comprises maintaining transformation models for use in providing the lineage information, said transformation models maintaining information about the source data of the target data object.

19-26. (Canceled)

27. (Currently amended) A computer-readable medium having contents for, when executed, causing a computer-based information handling system to perform a method for navigating data in a data warehouse stored in a data storage device connected to a computer-based information handling system, the method comprising:

registering one or more first sources of data in an information catalog, wherein the catalog defines a plurality of functional objects for creating user-defined object types;

receiving input from a user navigating a plurality of data objects stored in the data warehouse selecting a first target data object, said the first target data object derived by one or more transformations performed on the one or more first sources of data;

selecting the first target data object in response to receiving said user input;

providing transformation lineage information about at least one of said one or more first sources of data;

providing transformation model information of the one or more transformations performed on the one or more first sources of data to derive the first target data object, the transformation model information providing a user with transformation producing function information of the first target data object including a derivation of the first target data object from the one or more first sources of data;

using a metadata synchronizer, detecting a change in the registered one or more first sources of data as changed source data, and ~~updating~~selectively refreshing metadata in the information catalog to reflect the detected change;

registering the changed source data in the information catalog;

selecting a second target data object, the second target data object being associated with the changed source data by the one or more transformations performed on the changed source data to derive the second target data object; and,

providing updated transformation lineage information about the changed source data from which the second target data object was derived via the one or more transformations performed on the changed source data to derive the second target data object.

28. (Currently amended) A system for navigating data in a data warehouse stored in a data storage device connected to a computer-based information handling system, the system for navigating data comprising:

a plurality of data objects, including a first target data object, the first target data object derived via one or more transformations performed on one or more first sources of data;

a transformation lineage system which stores transformation lineage information for the first target data object, the transformation lineage information associating the first target data object with the one or more transformations and identifying the one or more first sources of data;

a user interface for receiving user input for selecting of the first target data object;

said user interface configured to display the transformation lineage information in response to receiving user input selecting the first target data object;

a transformation model information system which provides information of the one or more transformations performed on the one or more first sources of data; and,

a metadata synchronizer configured to detect a change in the one or more first sources of data as changed one or more sources of data and to selectively refresh metadata in the

transformation lineage system to reflect the detected change, wherein the transformation lineage system is configured to provide updated transformation lineage information about the changed one or more sources of data in response to selection of a second target data object, the second target data object being related to the changed one or more sources of data by the one or more transformations performed on the changed one or more sources of data to derive the second target data object.

29. (New) The method of claim 1, wherein the selectively refreshing the metadata in the information catalog includes selectively refreshing the metadata in the information catalog to reflect the detected change over a timed basis.

30. (New) The apparatus of claim 7, wherein the selectively refreshing the metadata in the information catalog to reflect the detected change includes selectively refreshing the metadata in the information catalog over a timed basis.

31. (New) The article of manufacture of claim 13, wherein the selectively refreshing the metadata in the information catalog to reflect the detected change includes selectively refreshing the metadata in the information catalog over a timed basis.

32. (New) The computer readable medium according to claim 27, wherein the selectively refreshing the metadata in the information catalog to reflect the detected change includes selectively refreshing the metadata in the information catalog over a timed basis.

33. (New) The system for navigating data according to claim 28, wherein the metadata synchronizer is configured to selectively refresh the metadata in the transformation lineage system over a timed basis.